



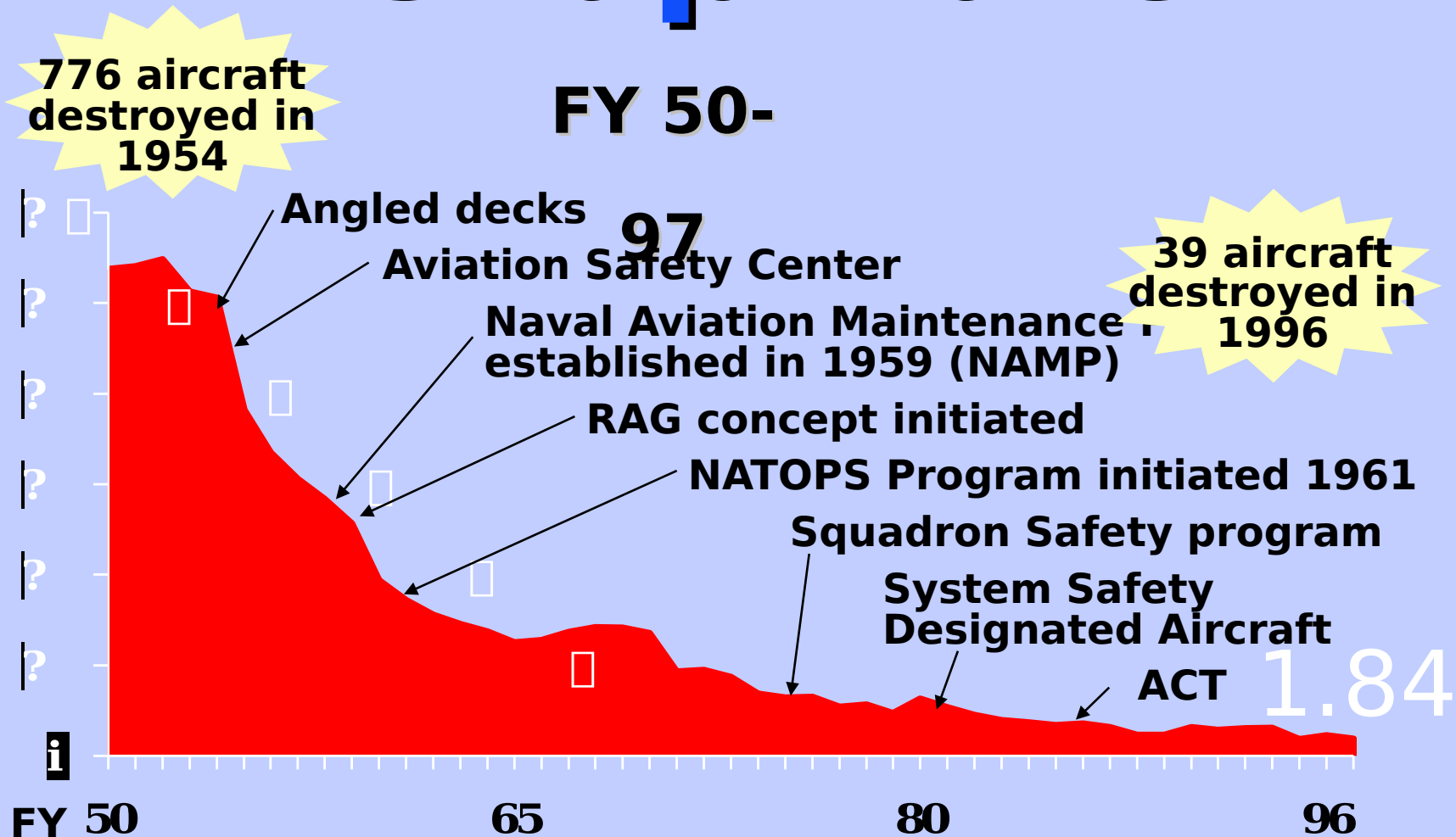
OPERATIONAL RISK MANAGEMENT

“The goal is to train, deploy, defeat the enemy and return with all hands. When we forget, suspend, or ignore normal operating procedures, these tasks become dangerous. We must comprehensively incorporate ORM. Goals must be weighed against risks, and controls implemented to make operations as safe as possible. From the battle group commander to the most junior seaman, we must all carefully weigh the possible impact of any decision.”



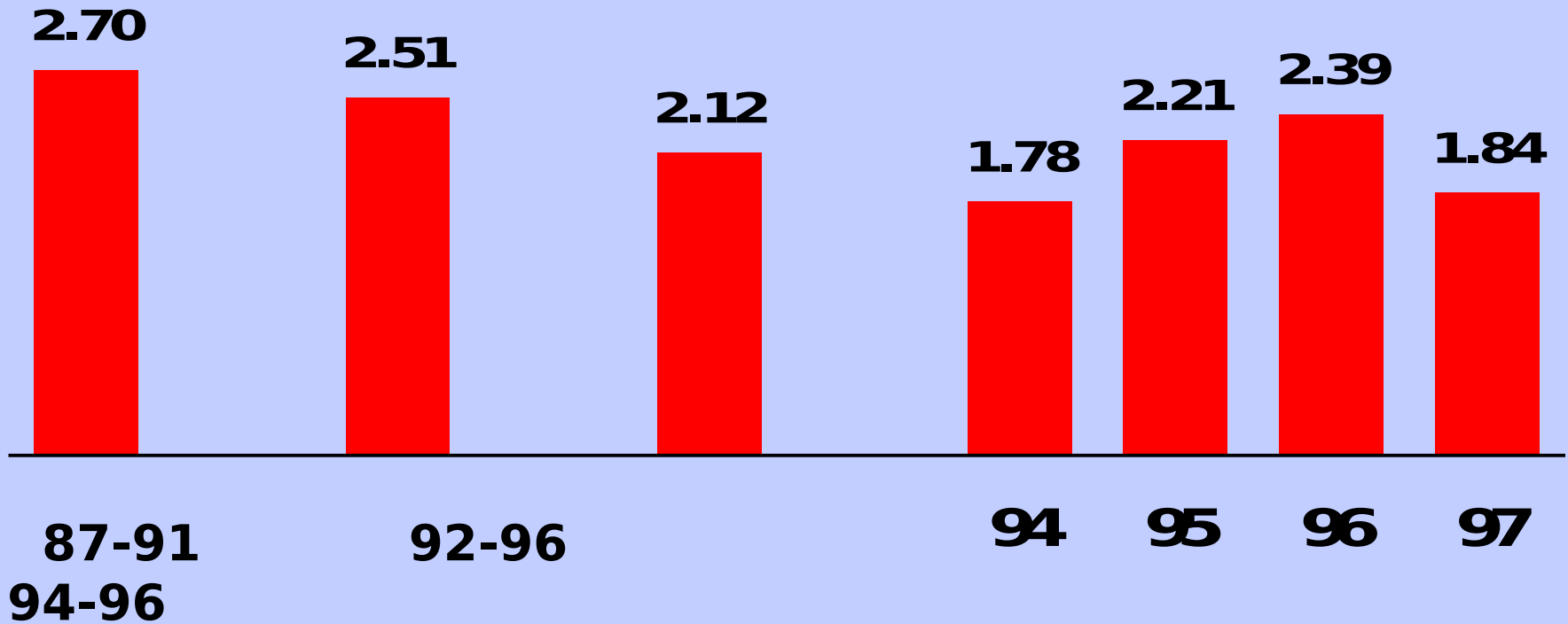
OW Battle Group
CNDR

Naval Aviation Mishap Rate



Five-Year Trends Are Down

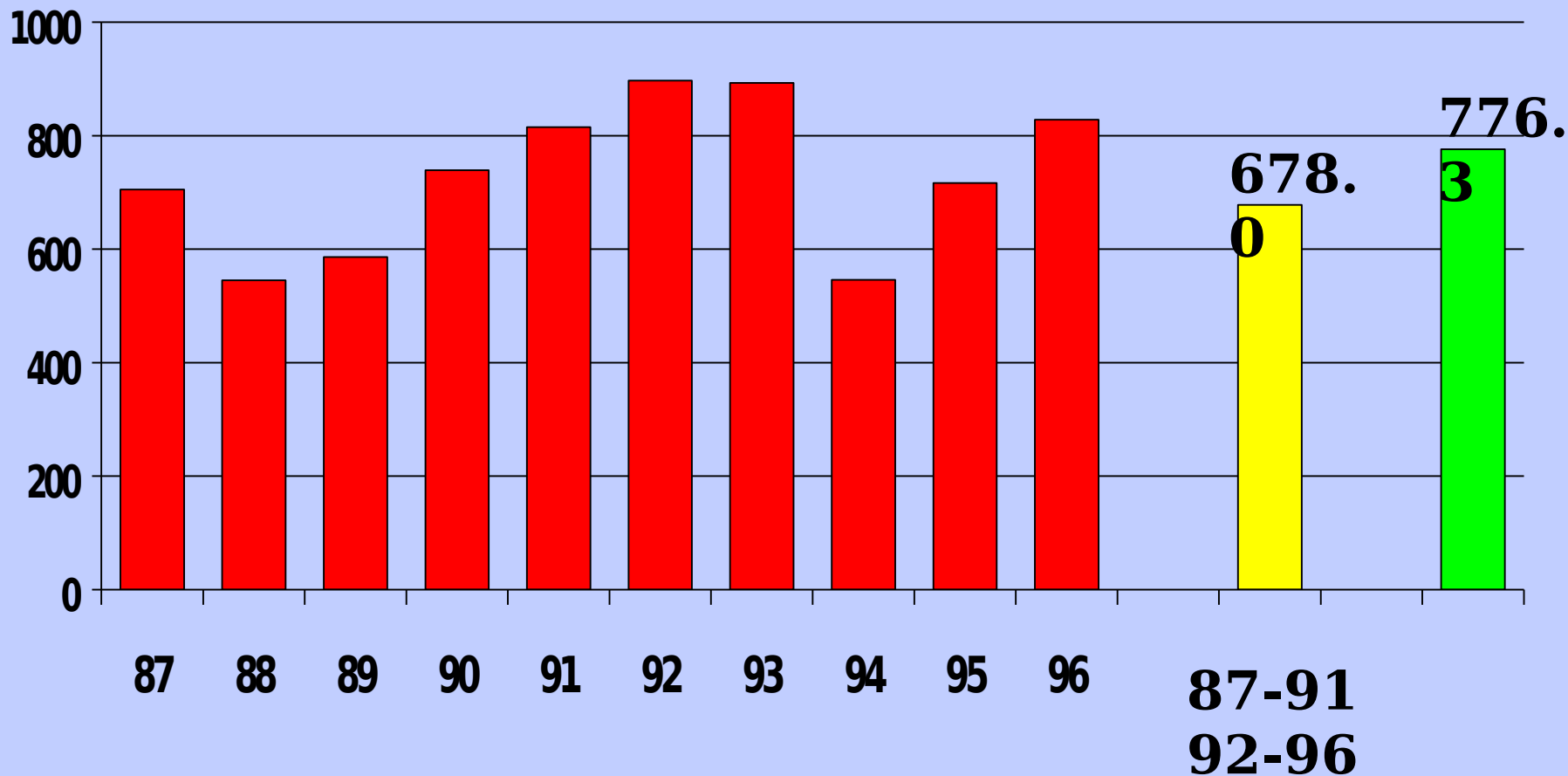
Navy & Marine Corps Class A's, FY87-8/16/97



FY87-96

Navy & Marine Corps Class A's

Million Dollars



Top Factors Credited With Positive Impact on Safety Performance (Consolidated CNAL, CNAP, CNRF Fleet Inputs)

1. Command Climate
2. Aircrew coordination training (ACT) program
3. Positive, no penalty use of HFC/HFB
4. Information flow (hazard reports, OAG, etc.)
5. Improvements in quality of training
6. Risk assessment/management approach to decisions
7. Overall safety awareness & communications flow

Top Factors Credited With Positive Impact on Safety Performance

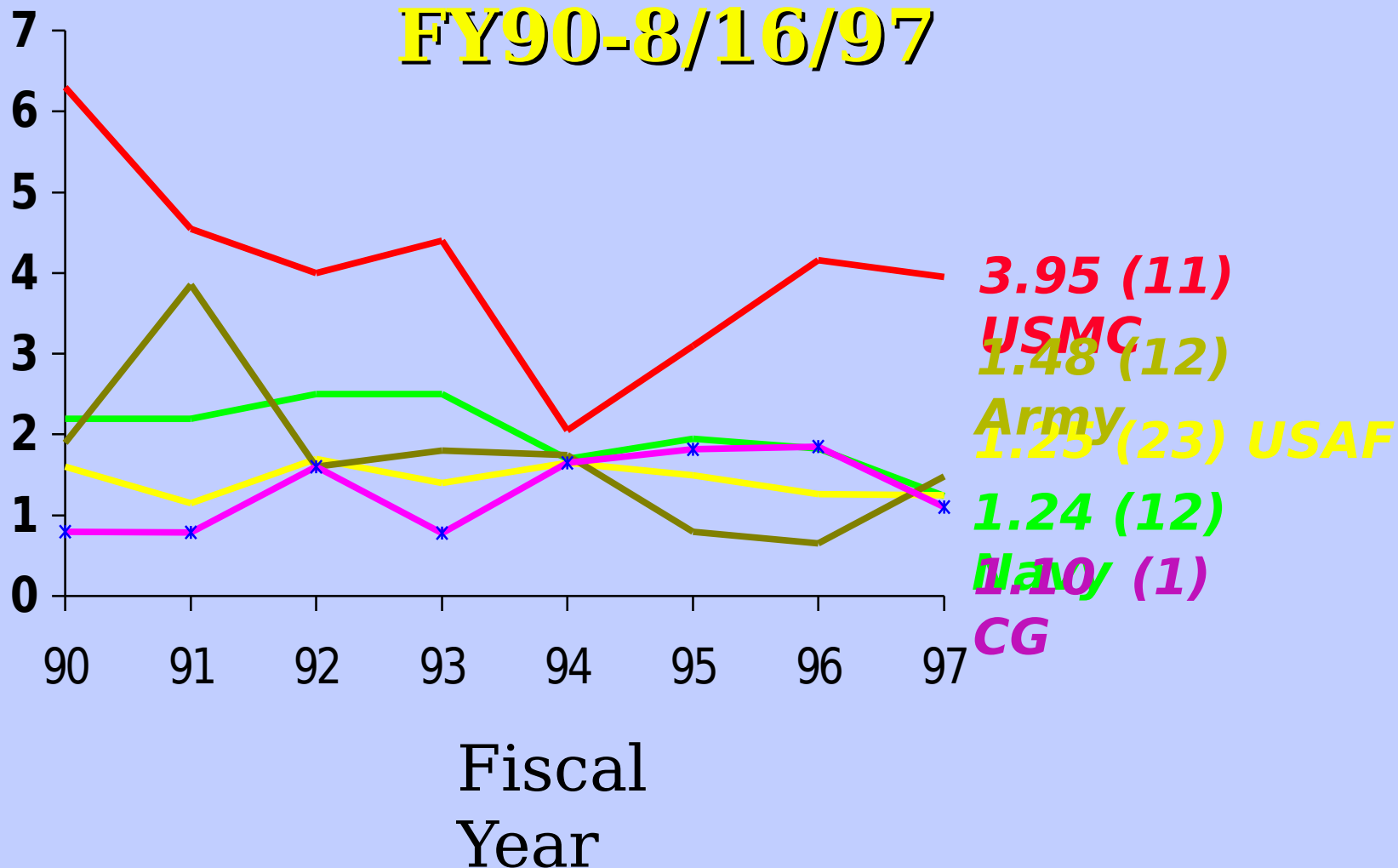
Consolidated CNAL, CNAP, CNRF Fleet Inp

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7. Overall safety awareness & communications flow
8. Better maintenance

Marine Corps Has Highest Rate

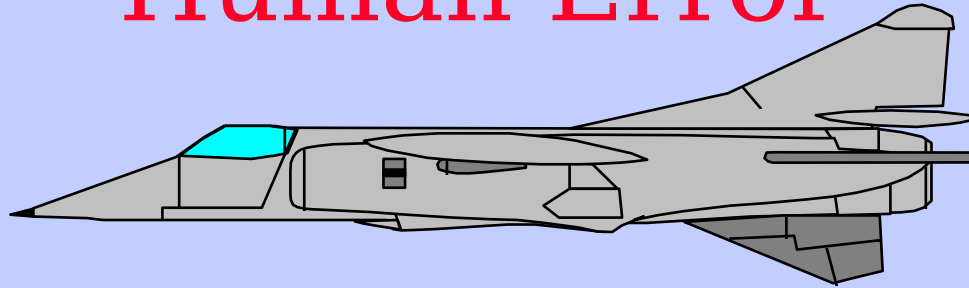
Class A Flight Mishap Trends

FY90-8/16/97



USN/USMC Aviation Losses

4 of every 5 Class A
Flight Mishaps Involve
Human Error



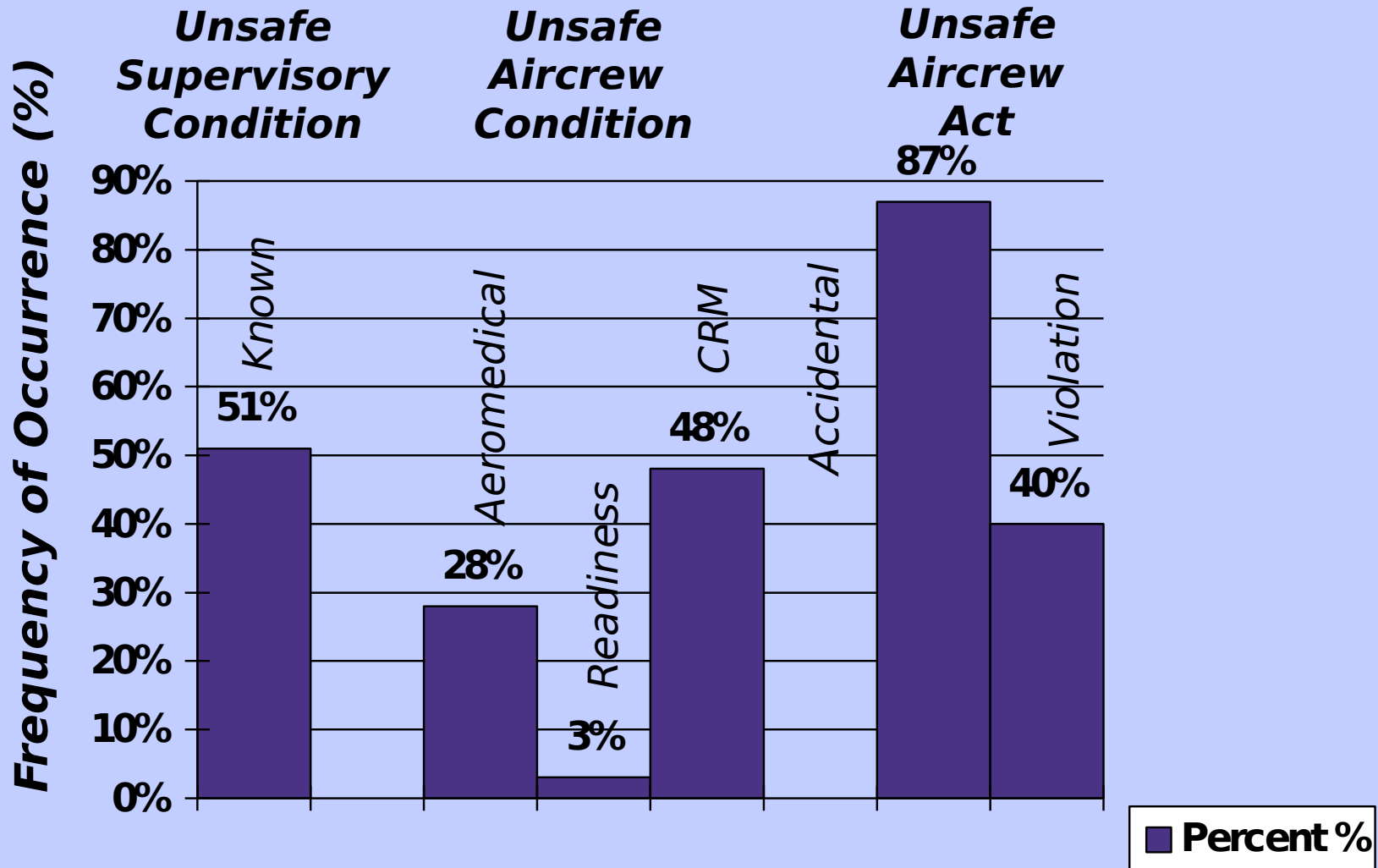
Human Factors QMB

Reducing Human Error in Naval Air Operations:

“Risk management is our doctrine”

- **Dissect mishap data**
- **Safety culture assessment**
- **Benchmark successful programs**
- **Recommend process improvements**
 - **Leadership**
 - **Training**
 - **Operational Risk Management**
 - **Information management**
 - **Investigations**

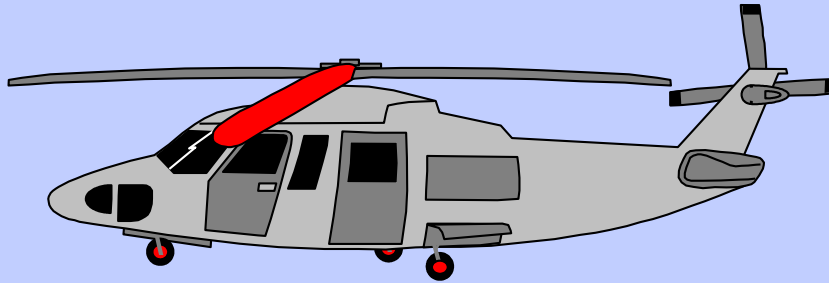
USN/USMC FY 90-96 Operational Class A FM HF Analysis: Overall Breakout



(n=185)

Potential HF Interventions

	Leadership & Policy	Organizational Effectiveness	TRNG, QUAL, & SOP	ORM	HFC/B & FNAEB	SIM & Mishap INVEST	A/C SYS
Supervision	X	X	X	X	X	X	
AEROMED			X	X	X	X	X
Readiness	X	X	X	X	X	X	
CRM	X		X	X	X	X	
Accidental			X	X	X	X	X
Violation	X	X		X	X	X	X



Wires, Wires

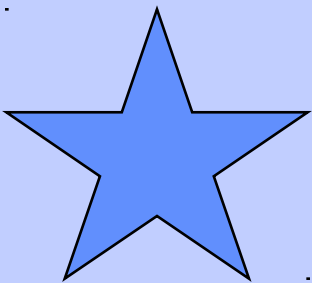
Class A on 9/25/95 destroyed an H-60, no fatalities

- > Mishap aircraft was dash 2 of a scheduled, night, NVD, SEAL insertion/extraction as part of Air Wing work-up.
- > Insertion went late but as planned; extraction was aborted.
- > While loitering at low level after mission abort, aircraft struck power-lines and crashed.

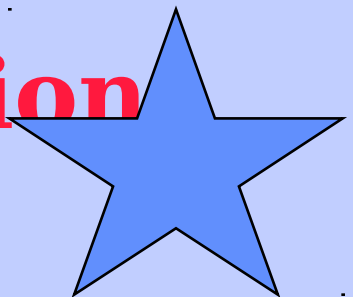
Organizational Culture

“The way we do things here”

- * Fundamental building blocks
- * Group values and standards
- * Medium for growth
- * Shaped by leadership



Key Drives Decision



ORM

Process ...

NOT Program!

Implementing ORM in Your Command

- **Incorporate Risk Management in Decision Making at All Levels**
- **Operational Risk Management Makes Everyone a Risk Manager**

ORM Implementation Concept

- Naval Aviation Leads The Way!
- Leverage the Army's Investment in ORM
- PHASE I: JUMP START for Operational Units
- PHASE II: CNATRA/FRS/FWS Pipeline Training
- PHASE III: CNET Pipeline Training

ORM - Levels of Training

- Indoc

- User

- Advanced

- Leader

- Senior Leader

Indoctrination Training Course Outline

PURPOSE: To provide students with a basic understanding of what Risk Management is, the benefits derived from it, the concepts that apply to it, and how to do Time Critical Risk Management.

CONTENT:

- ⇒ ORM terms and definitions
- ⇒ ORM introduction/concept
- ⇒ Four Principles of ORM
- ⇒ ORM vs. traditional approach
- ⇒ Benefits of ORM
- ⇒ Three Levels of ORM
- ⇒ Time Critical ORM, examples and demonstration
- ⇒ Specific applications (connection to existing processes/procedures)

LENGTH: 1 hour

AUDIENCE: E-1 through E-4; O-1/2

User Training Course Outline

PURPOSE: To teach the student how to work through deliberate five step process and use previously developed application specific techniques (i.e. flight brief RA).

CONTENT: Indoctrination Training plus:

- ⇒ Deliberate ORM process and demonstration
- ⇒ Basic hazard identification, tools and examples
- ⇒ Hazard assessment tools and examples
- ⇒ Risk assessment tools and examples (command worksheet)
- ⇒ Deliberate ORM practical exercise
- ⇒ Specific applications (connection to existing processes/pr

LENGTH: 6 hours

AUDIENCE: E-5 through E-7; O-2/3

Advanced Training Course Outline

PURPOSE: To teach students how to apply any level of ORM and provide the tools necessary for implementing at their command. This course can be combined with a Team site visit to set up proven ORM techniques.

CONTENT: User Training plus:

- ⇒ In-depth hazard identification tools and examples
- ⇒ Risk assessment tools and examples (cross section of available)
- ⇒ Communication/presentation approaches
- ⇒ Command implementation and leadership concepts
- ⇒ Specific applications (connection to existing processes/procedures)
- ⇒ On-site application of ORM techniques (Tiger Team site visit)

LENGTH: 2 days classroom; 1 day on-site

AUDIENCE: E-8/9; O-4/5

Leader Training Course Outline

PURPOSE: To give squadron leadership enough know to understand in-depth and deliberate ORM, what OR provide and how to implement it within their units.

CONTENTS: Abbreviated User Training plus:

- ⇒ Synopsis of In-depth hazard identification tools
- ⇒ Risk assessment tools and examples
- ⇒ Command implementation and leadership concepts
- ⇒ Specific applications

LENGTH: 4 hours

Senior Leader Training Briefing Outline

PURPOSE: To provide senior leaders (flag officers and COs) with a basic understanding of the ORM process, benefits derived from it, the three levels and some applications of ORM.

CONTENT:

- ⇒ Background
- ⇒ Three Levels of ORM
- ⇒ Five Step Process
- ⇒ ORM vs. traditional approach
- ⇒ Specific fleet applications
- ⇒ Benefits of ORM
- ⇒ ORM implementation status and goals

LENGTH: 2 hours

ORM - Implementation Plan

- PHASE I: Jump Start for Operations
 - Naval Safety Center “Train the Trainer” Course
 - Senior Leader Training
 - Squadron Workshop Training

Squadron Workshops

- 3 Days
- Indoc/User course for all aircrew and maintain
- Advanced course for all Department Heads and Senior Enlisted
- Leader course for CO/XO
- Site visit to assist with incorporating ORM tech into squadron processes

ORM - Implementation Plan

- PHASE II: Long Term CNATRA - FRS - Pipeline Training
 - VT/HT Flight Instructor (user/adv)
 - Student API (indoc) and VT/HT (user)
 - FRS (user)
 - FWS/Type Wing (adv)
 - PCO/PXO ASC course (leader)
 - Follow-on Train the Trainer School (adv/TtT)

ORM - Implementation Plan

- PHASE III: CNET Pipeline Training
 - Leadership Continuum (appropriate to seniority)
 - Aviation 'A' Schools (indoc)
 - NAMTRAGRU (user)
 - Aviation Safety Specialist Course (advanced)

Vision of ORM Expertise

FLAG OFFICER	LEADER	PREVIOUS TRAINING
MAJOR COMMAND	LEADER	PREVIOUS TRAINING
CO/XO	LEADER	LEADERSHIP CONTINUUM ASC
DEPARTMENT HEAD	ADVANCED	LEADERSHIP CONTINUUM TYPE WING DH SCHOOL
PILOT/DIVISION OFFICER	USER	LEADERSHIP CONTINUUM UPT
MAINTENANCE	USER/ INDOC	LEADERSHIP CONTINUUM
PERSONNEL		NAMTRAGRU

Forecast / Actual Mishaps

FY96 & FY97 (through 18 Aug 97)

Mishaps

	Navy/Marine	FY96
FY97		
	Operational Class A Mishaps	80/ 84
	80/ 56	

Deaths

	Operational	57/ 71
58/ 43		

Non-Operational Deaths

	Motor Vehicle	139/ 128
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